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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/559,947	02/08/2007	Michael Nicolai	VO-744	1506
43419 7590 03/03/2009 PAULEY PETERSEN & ERICKSON 2800 WEST HIGGINS ROAD SUITE 365 HOFFMAN ESTATES, IL 60195			EXAMINER WALBERG, TERESA J	
			ART UNIT 3744	PAPER NUMBER
			MAIL DATE 03/03/2009	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/559,947

Applicant(s)

NICOLAI ET AL.

Examiner

Teresa J. Walberg

Art Unit

3744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 December 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
- Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3, and 5-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakajima (JP 4-335557) in view of Nakazato et al (EP 0 741 269).

Nakajima discloses a cooling installation (Fig. 1) for cooling electronic equipment (see English language abstract) including a heat exchanger or a plurality of parallel operated heat exchangers (12 in Fig. 1) housed in a heat exchanger cabinet (3) having an interior coupled to an air inlet opening and an air outlet opening (Fig. 1), cold air supplied to the cabinet being conducted over a heat exchanger and cooling a coolant flowing therein (Fig. 1), a water inflow and return flow of one of the heat exchange being connected with a feed line and return line of each of the switchgear cabinets to be cooled (at 12 in Fig. 1), the parallel heat exchangers being arranged horizontally aligned (Fig. 1) and nearly fill the interior of the heat exchanger cabinet (Fig. 1), a pump (10) in the water flow line, a fan positioned on the heat exchanger cabinet and having an opening connected with the interior (Fig. 1), a fan removing air from the interior (Fig. 1), an air inlet located in the cabinet bottom (Fig. 1), the heat exchanger (5)

extending over an entire height of the interior (Fig. 1), the parallel heat exchangers (12) being arranged on top of each other (Fig. 1).

Nakajima does not appear to disclose part of the cold air being fed from the double bottom into the interior and a remaining cold air being conducted further in the double bottom.

Nakazato et al disclose a cooling installation where part of the cold air is fed from the double bottom into the interior and the remaining cold air is conducted further in the double bottom.

It would have been obvious in view of Nakazato et al to provide air flow arrangements in which part of the cold air is fed from the double bottom into the interior and the remaining cold air is conducted further in the double bottom for the cooling installation of Nakajima, the motivation being to enable use of the cooling system to cool multiple cabinets or devices.

3. Claims 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakajima (JP 4-335557) in view of Nakazato et al (EP 0 741 269) and further in view of Schneider (DE 196 09 687).

Nakajima in view of Nakazato et al disclose a cooling installation having the claimed structure with the exception of the heat exchanger being installed in an inclined position.

Schneider discloses a cooling installation including a heat exchanger (17) installed in an inclined position (see the figure). It would have been obvious in

view of Schneider to position a heat exchanger in an inclined position in the cooling system of Nakajima in view of Nakazato et al, the motivation being to fit an increased area of heat exchanger into a particular space.

It is unclear whether Nakajima or Nakazato et al disclose the use of an expansion vessel in the water line of the heat exchanger. However, it is conventional in the art to use expansion vessels with heat exchangers. It would have been obvious to one of ordinary skill in the art to use an expansion vessel with the heat exchanger of Nakajima in view of Nakazato et al, the motivation being to obtain improved functioning of the liquid heat exchanger.

4. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.
5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Teresa J. Walberg whose telephone number is 571-272-4790. The examiner can normally be reached on M-F 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on 571-272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Teresa J. Walberg/
Primary Examiner, Art Unit 3744

/TW/